ATOMIC ENERGY newsletter®

A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH
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Dear Sir:

An allocation for its atomic energy program of £68,264,390 ($191,140,292) has been set up by the British Government for the fiscal year beginning April 1, 1956. The new budget reflects increased expenditures for the program of atomic power plants, for basic and applied research, for nuclear weapon activity, and for other phases of atomic energy work, and is £14,136,990 ($39,583,582) greater than the current atomic energy budget. (Other INTERNATIONAL ATOMIC ENERGY NEWS, p. 4 this LETTER.)

Nuclear Corp. of America has acquired in exchange for 408,000 shares of its class A stock the business and assets of Central Sales & Mfg. Corp., Denville, N.J. This is the second company acquired by Nuclear; in November, 1955, Radioactive Products, Inc., Detroit, Mich. was acquired . Sam Norris, president of Nuclear, said acquisition of the Denville, N.J., maker of electronic equipment would add about $200,000 to gross profits in 1956. It brings the amount of Nuclear common and class A stock outstanding to 2,056,852 shares. (Other FINANCIAL NEWS, p. 3 this LETTER.)

A $3 million contract, recently given United Shoe Machinery Corp., Boston, Mass., by General Electric Co., provides for United to develop, build, and test reactor components for the Knolls Atomic Power Laboratory, which G-E operates for the USAEC. United's atomic power department will use its special facilities in Beverly, Mass., to test control equipment for the submarine advance reactor (now being developed at Knolls) under simulated operating conditions. This new Beverly testing laboratory, upon completion, will be the first privately owned facility of its type in the U.S. (Other BUSINESS NEWS, p. 2 this LETTER.)

To ensure adequate supplies of uranium for Britain's requirements, the U. K. Atomic Energy Authority under contract will buy uranium concentrates from the Mary Kathleen Uranium, Ltd., mine in north-west Queensland, Australia. Mary Kathleen Uranium is a member of the Rio Tinto group of companies. To bring the mine into production, the U.K. AEA will lend up to £5 million for that purpose, while Rio Tinto will provide up to £2.25 million. Ore at Mary Kathleen is pitchblende associated with allanite, a complex rare earth deposit of a type which has not previously been mined for uranium. No separation difficulties are expected. (Other RAW MATERIALS NEWS, P. 4 this LETTER.)

New laboratory facilities of Nuclear Science & Engineering Corp. near Allegheny County airport (Pittsburgh, Pa.), now nearing completion, will be occupied April 1st, 1956, by Nuclear's department of biology and medicine. Under Abraham Edelmann, department manager, work will continue there on radiation sterilization of food; radiation sterilization of sewage; irradiation induced toxic factors; and other programs concerning nuclear aspects of biology and medicine. (Other NEW FACILITIES, p. 2 this LETTER.)

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ATOMIC ENERGY BUSINESS NEWS...

HEAVY WATER BEING SHIPPED ABROAD BY U.S.:- Eleven tons of heavy water have been shipped by the U. S. to Great Britain, and 5 tons to France, as initial shipments of a total of 129 tons which the U.S. is selling abroad. Great Britain will get an additional 39 tons, and France an additional 45 tons, while India will get 21 tons, Australia 11 tons, Italy 10 tons, and Switzerland up to 7 tons. Great Britain will use the material in several of its atomic power reactors. The Swiss order is for Reactor, Ltd., the private group which carries on nuclear research in Switzerland. All sales were made at $28.00 per pound, the price established by the USAEC.

CONTRACT FOR ULTRASONIC SYSTEM AWARDED:- Contract for the construction and installation of an unusually large ultrasonic cleaning and degreasing system for a facility of the USAEC has been awarded to Acoustica Associates, Inc., Glenwood Landing, N.Y. A company spokesman said that the system to be supplied the USAEC will be "the largest and most powerful of its kind conceived anywhere in the world to date". The system will utilize high-frequency generators totaling 20 kilowatts to supply power for the transducers which develop the ultrasonic energy.

NEW ATOMIC POWER PLANT PROPOSED:- Three Florida utilities, and two manufacturing concerns are planning a large capacity atomic power plant. The venture involves Florida Power Corp., Florida Power & Light, and Tampa Electric Co., as the utilities, and Babcock & Wilcox and Allis-Chalmers Mfg., who will furnish and install plant and equipment. Although no site has been announced, tentative capacity has been set at 200,000 KW, with an expenditure estimated at $50 million.

NEW SITE FOR PRIVATE MATERIALS TESTING REACTOR:- Westinghouse Electric Corp. now intends to build its nuclear materials testing reactor near Waltz Mill, Pa., nine miles south of Irwin, instead of at Blairsville, Pa., as previously planned. Charles H. Weaver, Westinghouse vice-president in charge of atomic power, and E. T. Morris, of the reactor project, said the move was made to bring the reactor closer to the company's other atomic power ativities. The full scale testing reactor, which will cost $6.5 million, and will operate in the range of 20,000 KW or above, will be used for testing materials under reactor conditions.

IRRADIATION OF DIAMONDS & OTHER GEM STONES NOW PERMITTED:- The ban on use of USAEC facilities for irradition of diamonds and other gem stones has been lifted by the USAEC. In force since 1953, the regulations were designed to prevent fraudulent alteration of the color of gem stones. (Under a new Trade Practice Rule for the diamond industry (rule 5), established by the Federal Trade Commission last month, it is an unfair practice to sell diamonds which have been improved by "coating, irradiating, heating, or nuclear bombardment" without stating that the improvement is not permanent, if that is the case. The rule is to protect the buyer of an altered gem, since a yellow diamond may be changed to a green color through nuclear radiation, but no knowledge of the permanency of the new product is available.)

U.S. CONCERNS ENGAGE IN NUCLEAR WORK FOR CANADA:- Some seven U.S. concerns have been given authorization by the USAEC to deal in classified information, materials and services with Canada, under terms of the power reactor bilateral agreement signed by the two nations last year. The authorizations were given to Catalytic Construction Co., for work on the 20,000 KW nuclear reactor which Canadian General Electric is building; to General Dynamics Corp. for design and development of a "swing" type reactor at the Chalk River nuclear research establishment; to General Electric Co. for service irradiation by Atomic Energy of Canada, Ltd., of prototype fuel elements for G-E's Commonwealth Edison project, and for work associated with Canadian General Electric; to Metals & Controls Corp., for fabrication of fuel elements and work on various alloys; to Nuclear Metals, Inc., for fuel element technologies, and work on thorium and zircalloy-sheathed uranium; to Rohm & Haass Co., for processing ores and production of refined uranium oxide; and to Westinghouse Electric International Co., for design, development and manufacture of materials and devices relating to nuclear reactors.

INCREASED COST OF NUCLEAR-POWERED SUBMARINES SHOWN:- The considerable increase in cost of nuclear powered underseas craft, as compared with conventional craft, has been disclosed by U. S. Navy figures showing that the six nuclear submarines it will start in fiscal year 1957 will cost $47 million each, and that the Skate-Swordfish type of nuclear submarine previously authorized will cost $51 million. This compares with $22.5 million as average cost of a conventional submarine.

ATOMIC ENERGY FINANCIAL NEWS...

NUCLEAR PRODUCTS FIRM BOUGHT BY INDUSTRIAL ORGANIZATION:- Anton Electronic Laboratories, Inc., Brooklyn, doing research, development, and production of nucleonic and electronic equipment, has sold an 80% stock interest and operating control of the firm to U. S. Hoffman Machinery Corp. Nicholas G. Anton, founder and president of Anton Electronic, and all present operating personnel, will continue management of the firm. Anton supplies nuclear counter tubes and corona discharge voltage regulator tubes to almost every company in the nuclear field, and has performed or now has underway research and development contracts with the USAEC, U. S. Navy, Signal Corps, Radio Corp. of America, Westinghouse, etc. Hoffman, originally concerned solely with dry cleaning and laundry machinery, has been diversifying into other fields. Its acquisitions are to be consummated largely by issuing stock from a 1 million share block of newly-authorized preferred shares, initially convertible into Hoffman common on a share-for-share basis.

MINING OPERATION BOUGHT BY NUCLEAR FIRM:- Vitro Corp. of America, New York, active in various phases of nuclear work, has paid $50,000 in cash and additional ore payments for the assets and business of Uranium Prospectors Co., Ltd., of Grand Junction, Colo. Uranium Prospectors has been mining a carnotite-type of uranium ore, chiefly at a location near Green River, Colo., where the company has large reserves. It is expected that about 1,500 tons per month of such ore will be milled and processed at the Salt Lake City mill of Vitro Uranium Co., a division of Vitro Corp.

PEAK YEAR IN SALES & EARNINGS REGISTERED BY ACCELERATOR MANUFACTURER:- High Voltage Engineering Corp., Cambridge, Mass., had gross sales of $2,007,000 for the year ended Dec. 31st, 1955, compared to $1,681,000 for 1954, according to Denis M. Robinson, president of High Voltage. Net earnings after taxes were $106,450, an increase over the $88,000 reported in 1954. Largest gain made by High Voltage was in its order backlog, with $3,750,000 on its books at year's end in 1955 compared with $1,060,000 early in the year, Dr. Robinson observed.

NEW BOOKS & OTHER PUBLICATIONS...on nuclear subjects...

Geneva-The World of Our Nuclear Future, by Ashton J. O'Donnell, manager, nuclear economics research, Stanford Research Institute. An evaluation of the international conference on peaceful uses of atomic energy held Aug., 1955, in Geneva.--Stanford Res. Institute, Menlo Park, Calif. (n/c)

Possibilities of Action in Field of Nuclear Energy. Report of the Organization for European Economic Cooperation (working party on nuclear energy). Contains recommendations for methods of cooperation in nuclear energy development among the 17 European nations who are members of OEEC.--OEEC Mission, Publications Office, 2000 P St., N. W., Washington 6, D. C. ($1.00)

101 Atomic Terms. A popular-type glossary on atomic energy.--Esso Research & Engineering Co., Linden, N.J. (n/c)

NOTES: USAEC reports newly available under the Commission's stepped-up program of declassification and release of such reports are in Report Announcement Bulletin No. TID-1901. In addition, a semi-cumulative listing of other newly available USAEC reports are in the USAEC's Price List No. 25. Both TID-1901 and price list no. 25 may be obtained at no charge from Office of Tech. Services, Wash. 25, D.C.

Nuclear Notes for Industry of Mar. 5, 1956 is a list of current unclassified USAEC reports of special industrial interest; available at no charge from USAEC, Tech. Information Extension, Oak Ridge, Tenn.

A revised Radioisotope Catalog listing 100 different preparations made and distributed by Oak Ridge National Laboratory, giving procedures for obtaining isotopes, etc., may be obtained from the Laboratory at P.O. Box P, Oak Ridge, Tenn.

PEOPLE...in the atomic energy field...

George White, former executive vice-president and general manager of Vitro Corp. of America, has been named general manager of the Atomic Power Equipment Department of General Electric Co. Mr. White replaces Willard A. Kitts, who has been acting manager.

Charles D. W. Thornton, has become assistant to the president of Farnsworth Electronics Company, Fort Wayne, Ind., a division of International Telephone & Telegraph Co. In his new post he will plan and initiate expansion of the company's activities in the atomic energy field.

RAW MATERIALS...prospecting, mining, marketing...

UNITED STATES:- Arrangements have been made by the USAEC with the Ohio Oil Co., in association with Arthur E. Pew, Jr., of Philadelphia, under which the USAEC will buy a specified quantity of uranium concentrates to be produced from uraniferous lignites. Ohio Oil and Mr. Pew are conducting development on an economic process for recovering uranium from lignites, with Catalytic Construction Co., Philadelphia, being retained to proceed with pilot plant operation. The USAEC has also been doing research and development on lignite processing, and will continue the work.

CANADA:- The Canadian government has moved to Sept. 30th, 1957 the deadline for the start of production from uranium mines under special guaranteed price contracts with the government. Previous deadline had been Apr. 1st, 1957. (Last August, Canda had announced that no guaranteed price contracts would be given uranium producers after Mar. 31st, 1956 unless production could begin by Apr. 1, 1957, with all deliveries contracted for completed by Mar. 31st, 1962.) Trade Minister C. D. Howe, in making the announcement, said he doubted total production would be "greatly in excess" of previous prospects.

W. J. Bennett, president, Eldorado Mining & Refining, Ltd., told the Prospector's and Developer's Assoc. in Toronto last fortnight that military demand for uranium by the U. S. would be the chief objective of the Canadian Government's purchasing program, at least he said, until 1962 when the guaranteed price would expire. Mr. Bennett noted that he was not informed as to whether U.S. military requirements would continue after 1962, and if so, at what level. This made it imperative, he said, for Canada to prepare for a general export market without delay, since it will be at least 1976 before Canada will require as much as 450-tons per year of uranium for nuclear power and other purposes.

NUCLEAR WEAPONS NEWS...

UNITED STATES:- Nuclear weapons development work at the Radiation Laboratory (operated by the Univ. of Calif.) at Livermore, Calif., is now being augmented by ordnance engineering functions. The new functions will be carried out by Sandia Corp., Albuquerque, N.M. Sandia Corp. (subsidiary of Western Elec. Co.) has operated Sandia Laboratory in Albuquerque since November, 1949, working closely with Los Alamos Scientific Laboratory (operated by Univ. of Calif.) on development and design of nuclear weapons. Although a small group of Sandia people came to Livermore in 1955, Sandia now intends to build its staff at Livermore to about 250 by July 1957, reaching 800 to 1,000 by July, 1958. The new people will be mostly engineers and draftsmen. (The radiation laboratory at Livermore is also expanding; approximately 800 people will be added by July 1957 to the present staff of 1800.)

GREAT BRITAIN:- Last week saw the departure from the R.A.F. station at Weston Zoyland, Somerset, England, of the remainder of Britain's air task force for the nuclear weapons tests in the Monte Bello islands, off the coast of Australia. The advance party has been in Australia; the new group of 12 aircraft and 230 men which has now left will make up a total strength of 24 aircraft and 500 officers and men. The air task force will use a fleet of Canberra aircraft to fly through the atomic cloud produced by the detonation taking samples of radioactive particles. Special filters have been installed on the aircraft to prevent contamination of air breathed by the crews. Varsity aircraft and helicopters will also be used to gather additional data following the explosion.

INTERNATIONAL ATOMIC ENERGY NEWS...

SITE CHOSEN FOR ATOMIC RESEARCH CENTER FOR ASIA:- The Republic of the Philippines has been selected as the site for the U.S.-financed regional research center for Asia, Secretary of State Dulles said in Manila, P.I., last week, where he is visiting. The announcement was also made last week by the International Cooperation Administration in Washington. In its initial stages, the center will necessarily be a training center, rather than a research establishment. Through ICA, the U.S. will provide funds for laboratory facilities, and for a nuclear research reactor, with some $20,000,000 in funds to be allocated. First step will be the dispatch of a group of nuclear physicists and others next month from the USAEC's Brookhaven National Laboratory, headed by Marvin Fox, chief of the laboratory's reactor division. Possible sites will be examined, and discussions will be held with participating countries to determine, in a preliminary manner, principle fields of interest.

ATOMIC PATENT DIGEST...

GRANTS TO PRIVATE CONCERNS AND/OR INDIVIDUALS:- Radiation detector; for geological exploration. U. S. Pat. No. 2,753,953 issued Feb. 21st, 1956; assigned to The Texas Co., New York, N.Y. (Inventor: Arthur L. Tirico.)

Radiation detector. An instrument for emergency directional detection of radioactivity. U. S. Pat. No. 2,736,815 issued Feb. 28th, 1956; assigned to International X-ray Inc., Mobile, Ala. (Inventor: H. L. J. Marshall.)

Density responsive apparatus; for measuring the level of material within a container, utilizing a source of ionizing radiation. U. S. Pat. No. 2,737,592 issued Mar. 6th, 1956; assigned to The Ohmart Corp., Cincinnati, Ohio. (Inventor, Philip E. Ohmart.)

Method of irradiating streams of liquids, gases, finely divided solids, etc., by continuous beams of high instantaneous ionization density. U. S. Pat. No. 2,737,593 issued Mar. 6th, 1956; assigned to High Voltage Engineering Corp., Cambridge, Mass. (Inventor: Denis M. Robinson.)

Apparatus for inspection of grain by X-rays. U. S. Pat. No. 2,737,594 issued Mar. 6th, 1956; to Robert Katz, Max Milner and Milford R. Lee, Manhattan, Kansas.

Cross feed indicator for simultaneous radioactivity well logging system. U.S. Pat. No. 2,737,595 issued Mar. 6th, 1956, to Serge A. Scherbatskoy, Tulsa, Okla.

Flexible shield for protection against harmful radiation. U. S. Pat. No. 2,737,597 issued Mar. 6th, 1956, to Louis J. Strobino, Utica, N.Y.

GRANTS TO GOVERNMENTAL ORGANIZATIONS:- Oxidation of uranosic oxide to uranium trioxide with nitric acid vapor. U. S. Pat. No. 2,735,745 issued Feb. 21st, 1956: assigned to USAEC. (Inventors: Edward R. Flook and Roger G. Sweet.)

Method of producing uranium tetrachloride. U. S. Pat. No. 2,735,746 issued Feb. 21st, 1956; assigned to USAEC. (Inventors: H. R. McCombie and E. L. Wagner.)

Ternary uranium alloy. U. S. Pat. No. 2,735,761 issued Feb. 21st, 1956; assigned to USAEC. (Inventors: F. A. Rough and H. A. Saller.)

Reactor control. U. S. Pat. No. 2,735,811 issued Feb. 21st, 1956: assigned to USAEC. (Inventors: A. M. Weinberg, G. J. Young, P. Morrison, L. A. Ohlinger.)

Uranium alkoxy compounds and method of preparing them. U. S. Pat. No. 2,735,857 issued Feb. 21st, 1956; assigned to USAEC. (Inventors: H. Gilman, E. Bindschadler.)

Suppressor circuit. U. S. Pat. No. 2,735,963 issued Feb. 21st, 1956; assigned to USAEC. (Inventors: W. R. Baker, Q. A. Kerns.)

Process of extracting uranium from a uranium bearing ore. U. S. Pat. No. 2,736,634 issued Feb. 28th, 1956; assigned to USAEC. (Inventors: A. M. Gaudin, R. Schuhmann, Jr.)

Zirconium ternary alloys. U. S. Pat. No. 2,736,651 issued Feb. 28th, 1956; assigned to USAEC. (Inventors: A. D. Schwope, W. Chubb.)

Nuclear reactor, U. S. Pat. No. 2,736,696 issued Feb. 28th, 1956; assigned to USAEC. (Inventors: E. P. Wigner, L. A. Ohlinger, G. J. Young, A. M. Weinberg.)

Lubricant for cold drawing of thorium wire. U. S. Pat. No. 2,736,700 issued Feb. 28th, 1956; assigned to USAEC. (Inventors: C. D. Graham, Jr. R. J. Donley.)

Distributed pulse height discriminator. U. S. Pat. No. 2,736,801 issued Feb. 28th, 1956; assigned to USAEC. (Inventors: C. E. Wiegand, O. Chamberlain.)

Pulse height analyzer system. U. S. Pat. No. 2,736,802 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: Lawrence Cranberg.)

Blocking oscillator. U. S. Pat. No. 2,736,806 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: Jack C. Miller.)

Ion producing mechanism. U.S. Pat. No. 2,736,808 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: William M. Brobek.)

Radioactivity measuring apparatus. U. S. Pat. No. 2,736,812 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: Alfred I. Weinstein.)

Radiation measuring device and apparatus. U. S. Pat. No. 2,736,818 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: Francis R. Shonka.)

Pocket radiation meter. U. S. Pat. No. 2,736,817 issued Feb. 28th, 1956; assigned to USAEC. (Inventor: P. R. Bell, Jr.)

Sincerely,

The Staff,
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